

## WHAT IS CLAIMED IS:

1. A communication system for communicating with near field devices using a machine body antenna, the system comprising:  
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an RF receiver element and an RF transmitter element forming an inter-communicating RF transmitter and receiver pair, and a machine body antenna cooperating therebetween, a near field device in electrical communication so as to cooperate with a first element of said transmitter and receiver pair,  
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wherein said machine body antenna is electrically isolated from ground and includes an electrically conductive machine frame electrically connected to so as to cooperate with and be excited by a second element of said transmitter and receiver pair,  
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and wherein said first element is within a near field of said machine body antenna without being in contact with said machine body antenna.
2. The apparatus of claim 1 wherein said first element is the transmitter of said transmitter and receiver pair and said second element is the receiver of said transmitter and receiver pair.  
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3. The apparatus of claim 2 wherein said near field device is a sensor.
4. The apparatus of claim 3 wherein said sensor monitors at least one physical characteristic associated with said machine body antenna.  
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5. The apparatus of claim 4 wherein said at least one physical characteristic includes pressure.

6. The apparatus of claim 5 wherein said machine body antenna is the body of a vehicle.
7. The apparatus of claim 1 wherein said machine body antenna is the body of a vehicle.
- 5 8. The apparatus of claim 6 wherein said sensor is mountable in cooperative association with a pneumatic tire valve of said vehicle.
9. The apparatus of claim 8 wherein said sensor and said transmitter are mounted in a housing and said housing is mountable to, so as to cooperate with, a base end of a valve stem of said tire valve.
- 10 10. The apparatus of claim 9 wherein said housing includes a cupped upper end shaped to fit conformably over said base end, and wherein a cavity is formed in said housing underneath said upper end and sized to house said sensor and said transmitter.
- 15 11. The apparatus of claim 10 wherein said sensor cooperates with said base end of said valve stem via an aperture in said upper end of said housing.
12. The apparatus of claim 1 further comprising a processor cooperating with said second element for processing information exchanging between said transmitter and receiver pair.
- 20 13. The apparatus of claim 1 wherein said first and second elements are both transceivers.
14. The apparatus of claim 12 wherein said machine body antenna is a machine having an electrical system and wherein said processor and said second element are powered by a demountable electrical coupling to said electrical system of said machine body antenna.
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15. The apparatus of claim 7 further comprising a processor cooperating with said second element for processing information exchanging between said transmitter and receiver pair and wherein said machine body antenna includes a vehicle having an electrical system and wherein said processor and said second element are powered by a de-mountable electrical coupling to said electrical system of said vehicle.
16. The apparatus of claim 15 wherein said coupling is adapted to removably couple with an electrical accessory power port in said vehicle.
17. The apparatus of claim 16 wherein said power port is a cigarette lighter plug-in port in a dashboard of said vehicle.
18. The apparatus of claim 4 wherein said second element includes a processor and an associated display for displaying processed information correlated to said physical characteristic.
19. A communication antenna for communications with a near field device using at least one transmitter and receiver pair, the antenna comprising:
- a machine body antenna which is electrically isolated from ground and includes an electrically conductive machine frame, and which, when in electrical communication with one transmitter or receiver element of the transmitter and receiver pair, is excited so as to enable communication between the transmitter and receiver pair when the other of the transmitter or receiver elements is in electrical communication with the near field device and mounted within the near field of said machine body antenna without being in contact with said machine body antenna.